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Finley, F.G.

From "THE PRACTITIONER" for August, 1897.

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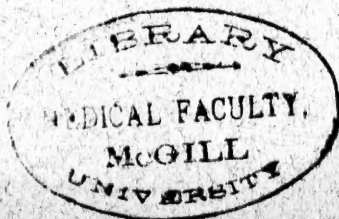
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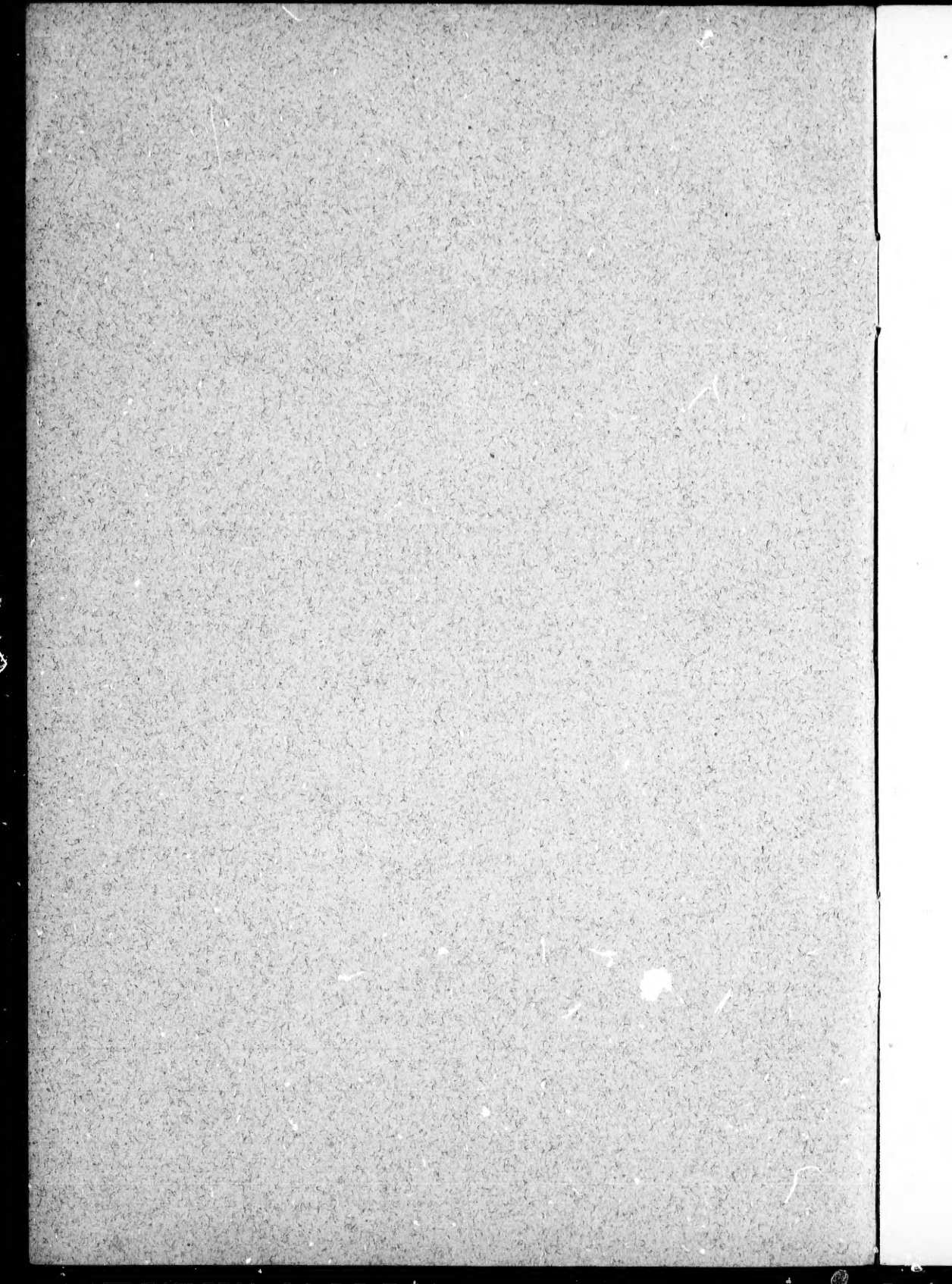
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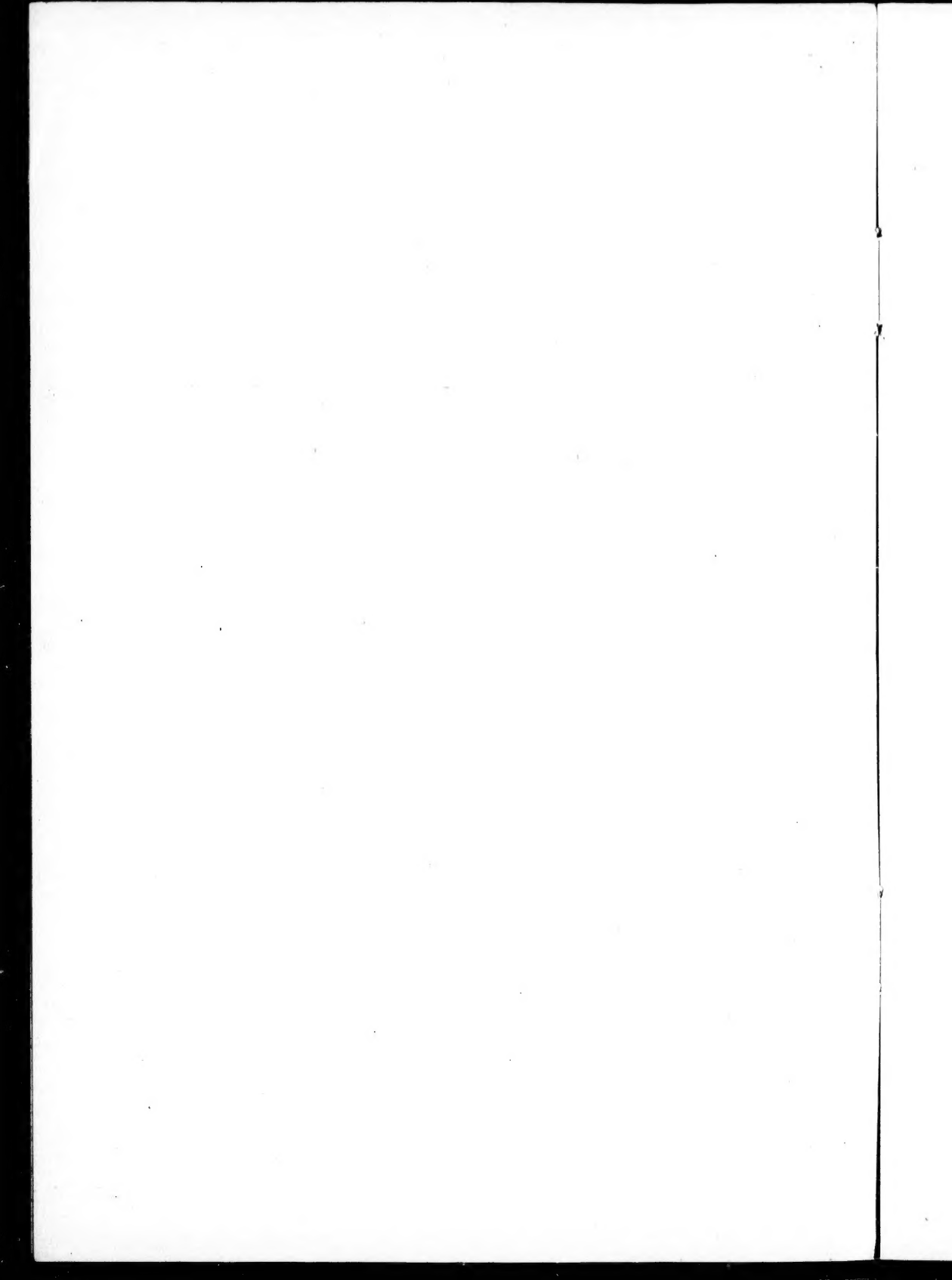
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A CASE OF PRIMARY SARCOMA OF THE PLEURA.

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J. M., aged sixty-seven, male, was admitted to the Montreal General Hospital on the 1st of May, 1897, complaining of pain in the left side of the chest, restlessness, and shortness of breath.

His previous health had always been good and his habits temperate.

The family history was one of longevity. The father died of cancer of the jaw, aged seventy-eight.

For three or four weeks before admission the patient began to suffer slightly from pain in the side, which was never severe; he became weak, felt unsteady in walking, suffered from severe cough without expectoration, and within the past two or three days noticed his breathing to be very short on slight exertion.

On examination he was a well-nourished elderly man, the muscles were rather flabby, the subcutaneous fat was well marked, and Heberden's nodules were present on the terminal finger joints.

The respirations were twenty-eight and slightly laboured; there was restlessness and inability to sleep.

The left side of the thorax was a little full, and expansion

almost *nil*; there was a flat note from apex to base, front and back, extending over to the right sternal border, and almost to the costal border in the anterior axillary line; the breath sounds were much enfeebled and completely absent behind; the vocal resonance and fremitus were also greatly diminished.

The cardiac impulse was not felt, but dulness extended two fingers' breadth to the right of the sternum; the cardiac sounds were also best heard in this locality. The temperature 97.8° F. The pulse was 104 and of fair volume.

Owing to the dyspnœa, restlessness, and evidence of large quantity of fluid, it was decided to aspirate; the needle was introduced in the sixth space in the axilla and ninety-two ounces of blood-stained serum were withdrawn. On the following day the note over the front of the chest was high pitched but not flat, but posteriorly the flat note extended up to the fifth spine.

The subsequent history was one of rapid collection of fluid and repeated aspirations to relieve dyspnœa. Between the 6th and 27th of May he was aspirated six times, the total quantity of fluid drawn off during this period being 354 ounces.

The temperature was afebrile throughout, the two-hour chart ranging from 96.4 to 98.4°; it reached 99° only on three occasions, and 100 and 100½° only on two occasions for a few hours.

The pulse during the greater part of his illness was remarkably small and feeble, and at times irregular, averaging about 100. On two occasions he had alarming syncopal attacks. The general nutrition remained fairly good, the subcutaneous fat abundant, but the muscles became extremely flabby and soft. Glandular enlargements were never present. Death from cardiac failure took place on June 1st.

On opening the chest the heart was found displaced to the right of the sternum, and the left pleura was greatly enlarged. On opening it 105 ounces of sero-sanguineous fluid escaped. The thoracic viscera were then removed *en masse*, the left pleura being readily stripped from the chest wall, and the impressions of the ribs being seen on its outer surface. Both layers of the pleura were universally thickened, the inner

surface being studded with nodules of a white or reddish colour, which on section were seen to be uniformly white and juicy. In size they varied from 5 to 30 mm. in thickness by 8 to 60 mm. in diameter, the pleura between the nodules averaging 5 mm. in thickness. The left lung was in a state of complete collapse, being compressed against the bodies of the vertebrae. One bronchial gland was slightly enlarged, seemingly from direct extension from the pleural growth. The remaining organs were normal, there being no evidence of new growth in any other part of the body.

Microscopic examination showed the growth in the pleura and bronchial gland to be a myeloid sarcoma, as characterised by the presence of large irregular-shaped multinuclear cells, with smaller round and oval cells between stroma non-evident, blood channels visible between rows of cells. The chief clinical features were thus a large and rapidly recurring blood-stained serous exudation in the pleura, an afebrile temperature, marked prostration of strength, and cardiac weakness.

The diagnosis made during life, after watching the progress of the case, was malignant disease of the pleura. This was based on the extremely rapid recurrence of the fluid and an afebrile temperature. The marked prostration and blood-stained fluid were also in harmony with this view.

On the occasion of the first tapping the colour of the fluid awakened a suspicion of tuberculosis. The absence of fever, however, was regarded as being extremely improbable in a severe tuberculous pleurisy.

The autopsy proved conclusively the presence of a myeloid sarcoma of the pleura. The absence of any evidence of implication of the bones or the viscera compels us to regard the pleural growth as primary.

Cases of primary malignant disease of the pleura are universally admitted to be extremely rare, and their existence is even denied by some authorities. The majority of cases are reported in inaccessible foreign journals, and are not even abstracted in the various Year-books.

In the following table we have summarised the main features of six cases of primary pleural sarcoma :—

Case and reference.	Age.	Sex.	Symptoms.	Physical signs.	Post-mortem appearances.
1.—Stewart & Adami, <i>Montreal Med. Jnl.</i> , 1894.	35	M.	Pain, frequent vomiting, weak pulse and raised surface temperature of left arm.	Bulging, dulness, distant blowing breathing, absent vocal fremitus at left apex, front and back. Puncture gave blood, showing cells larger than leucocytes, a few spindle and large sized cells.	Angio-sarcomatous mass in upper part of right pleura, involving intercostal humeral nerve.
2.—Deruschinsky, "Primäres Sarkom d. Pleura." <i>Deut. med. Woch.</i> , 1888.	47	M.	Dyspnoea, at first on exertion, and later at rest. Severe cough, purulent expectoration. Later, severe pain, weak radial pulse on left side. Repeated aspirations for removal of fluid. Emaciation, marasmus. Death with symptoms of cardiac paralysis; duration about six months.	Signs of fluid on left side. Slightly enlarged glands below clavicle and in axilla on same side.	Pleura universally thickened with nodular growths. Metastases in lungs and bronchial glands enlarged.
3.—Blumenau, "Primäres Sarkom d. Pleura." <i>Deut. med. Woch.</i> , 1896.	23	M.	Sense of pressure on left side, increasing to pain, radiating down left leg. Cachexia, cough and expectoration slight. Later, paraplegia, paralysis of bladder and rectum, decubitus, slight elevation of temperature.	Bulging of thorax at left base behind, with absence of respiratory movement. Feeble breath sounds over this area. Puncture negative.	Large tumour of pleura weighing 7 Kg. Erosion of vertebrae and pressure on spinal cord.
4.—Bernard, <i>Sajous's Annual</i> , 1895.	24	M.	Cough, dyspnoea, pain left side, night sweats. Death from cardiac and respiratory failure.	Dulness from base to middle of infra-spinous fossa. Heart displaced and, later, veins enlarged on chest wall.	Growth size of a sheep's head of left pleura, which is partially adherent and contains yellow fluid metastases in right pleura and lungs. Enlarged mediastinal glands.
5.—Boyce, <i>Sajous</i> , 1895.	14	F.	Pain in left side. Intense pain little and ring finger. Edema of arm.	Blood-stained fluid, two quarts removed. Glands size of walnuts in supra-clavicular and axillary regions.	No autopsy.
6.—Leube, <i>Hirsch J. b.</i> , 1889.	2	No details.	No details.	Bulging of affected side. Absolute dulness diminished V.F., slight blowing breathing. Displacement of the heart. Puncture negative.	No autopsy.

From an examination of these cases it would appear that primary sarcomatous growths of the pleura may appear as a single large growth, or as a diffused nodular thickening of the pleura with effusion of fluid, usually tinged with blood.

Examples of the former class are cases 1, 3, 4, 6; whilst the second is exemplified by cases 2, 5, and our own.

The physical signs differ materially in the two classes. In the case of single large tumours there is often bulging of the chest wall, dulness, absence of respiratory movements, feeble, sometimes blowing respiration, and occasionally cardiac displacement.

In the diffuse cases the signs are essentially those of unilateral pleural effusion. In our own case and in Deruschinsky's the recurrence of fluid after aspiration was extremely rapid, relief being often obtained for two or three days only. Of the other symptoms, pain is usually prominent, dyspnoea is present on exertion, and sometimes at rest; there is commonly a dry cough, and in two of the cases there was enlargement of the glands in the axilla and clavicular region, to the size of a bean or walnut. The temperature is afebrile, and there is a marked tendency to cardiac weakness. In two cases (1, 5) pressure symptoms in the arm, on the nerves and vessels, were prominent, and afforded material aid in the diagnosis. It is somewhat remarkable that in all the cases quoted, with the exception of Leube's, in which no statement is made on the point, the disease was on the left side.